

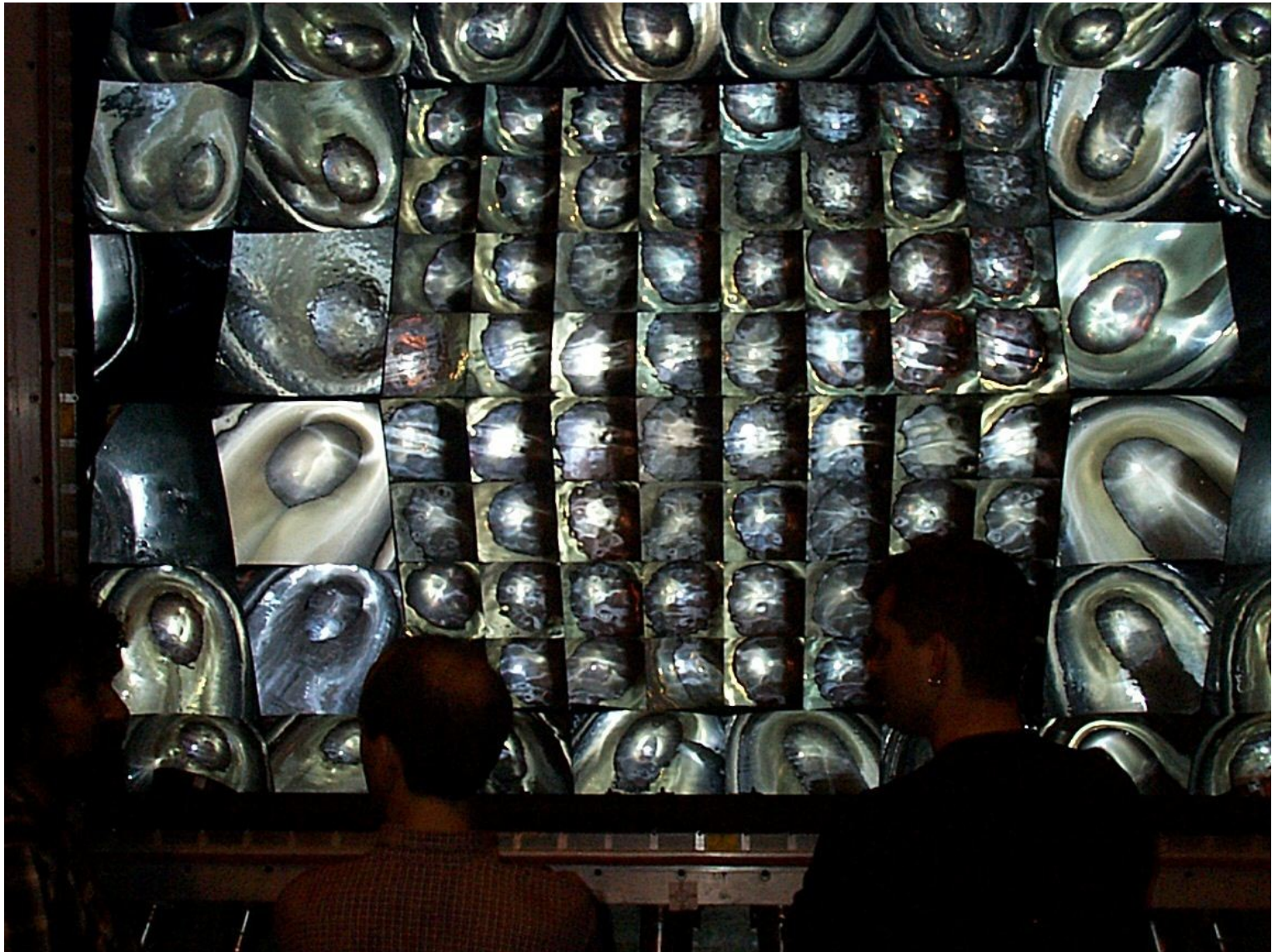
CKOV MIRRORS

30 May 2007

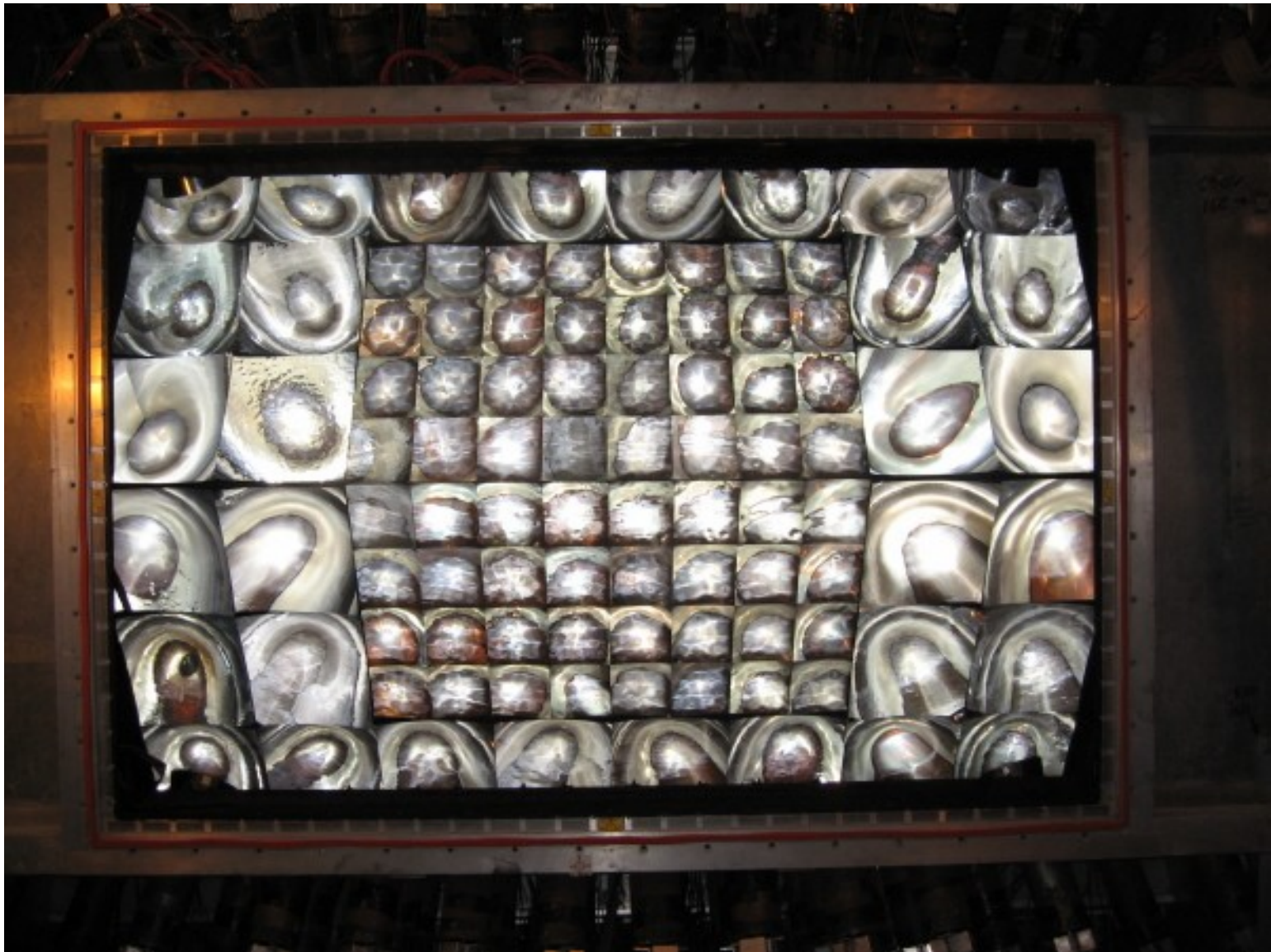
W.F.Baker

- On Friday, May 18th, Holger and I took a series of photographs of the CKOV counter mirrors from various points along the beam line upstream of the counter. The purpose of this was to study the dependence of the light collection characteristics on the target to CKOV distance.
- In what follows the distances are measured from the apex where the upper and lower mirror planes of the counter meet. The distance from there to the experimental target was originally designed to be 126.38 inches when the counter was built and the mirrors were glued to the support planes. In E907 the distance of the apex from the thin target position was 118.73 inches according to the data base.
- Many mirrors had what looked like water streaks. Whether these streaks were due to cleaning them or something else I do not know. Also, the lower mirror plane was not quite fully raised up to the apex. Therefore the photocathode images are not quite centered in the lower half of the counter.
- The CKOV has been moved to lab E/F to make way for JGG coil replacement.

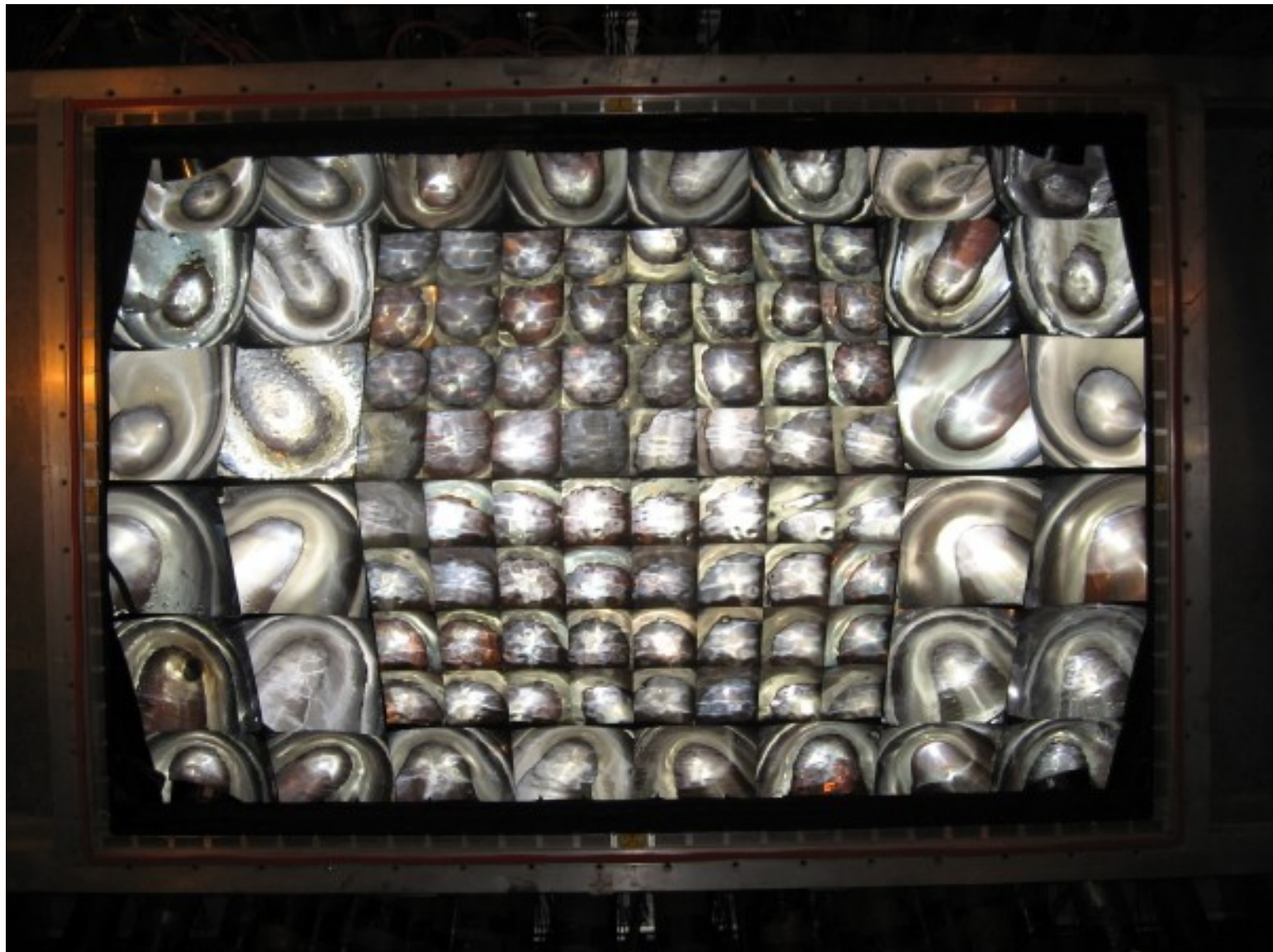
A Pre-MIPP Photo of Mirrors from an Unknown Position



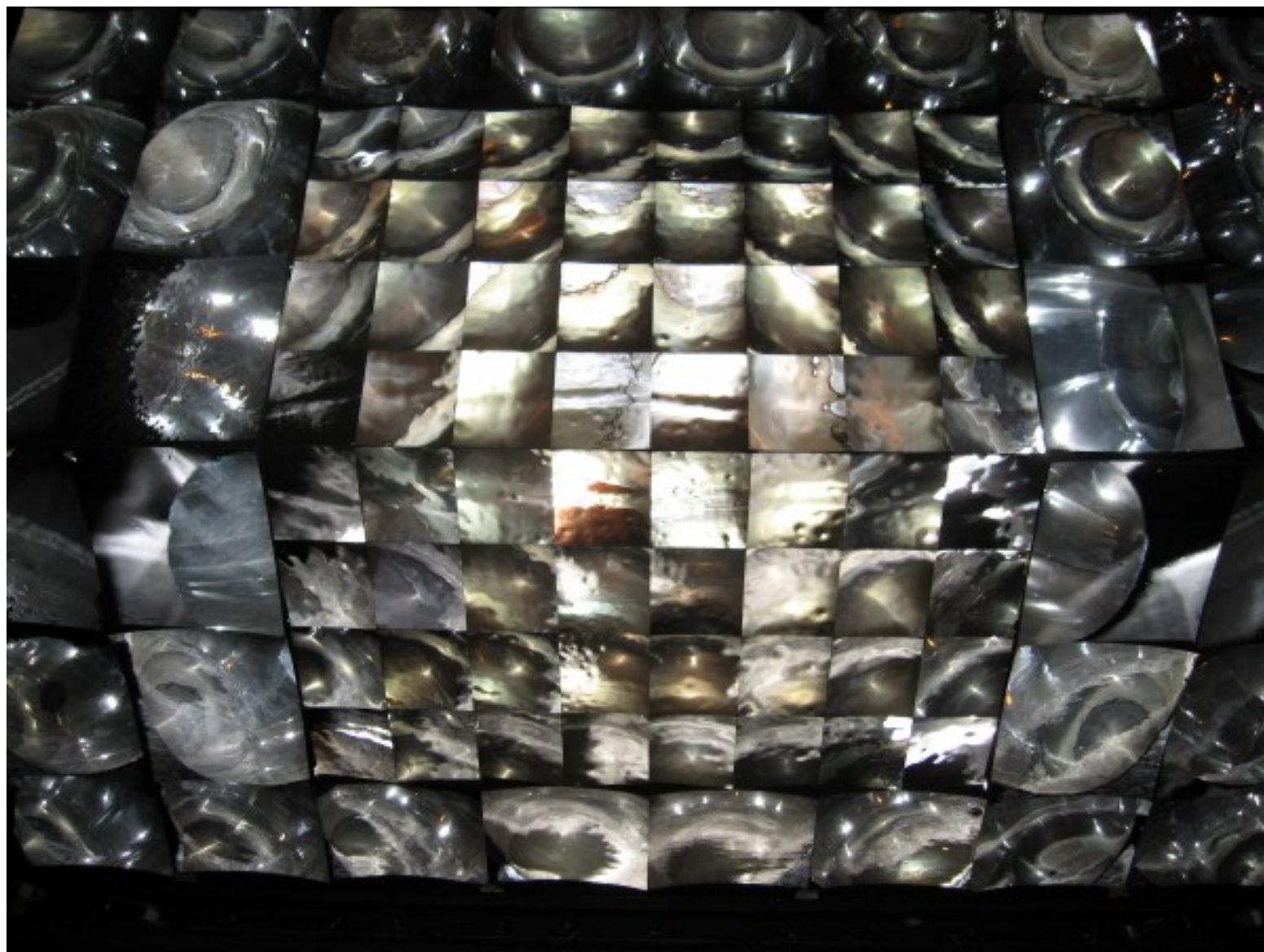
126.38" from apex (original design distance)



120.38" from apex (near to E907 position)



83.38" from apex



96.38" from apex



108.38" from apex



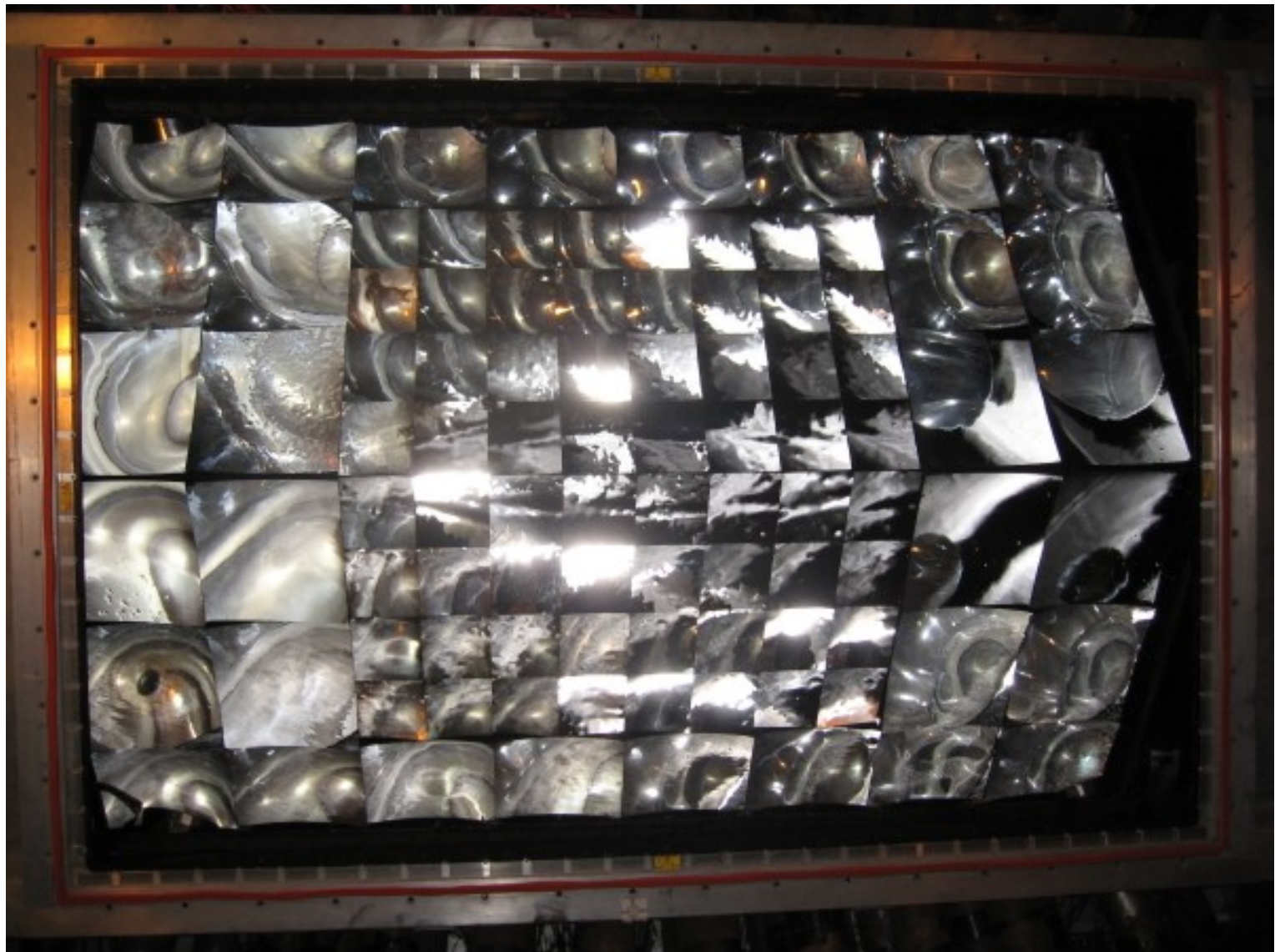
114.38" from apex



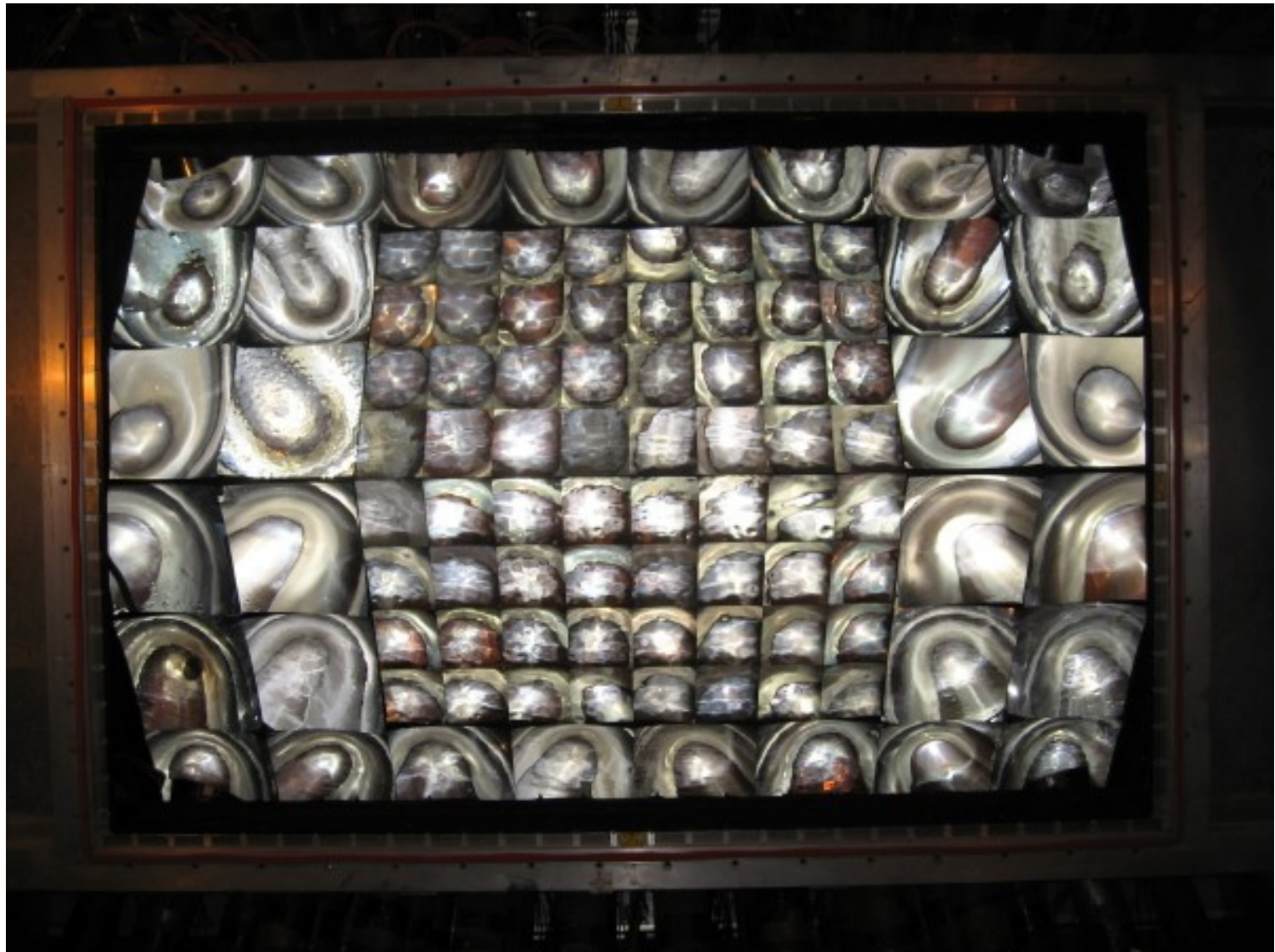
114.38" from apex and 12" east (beam right)



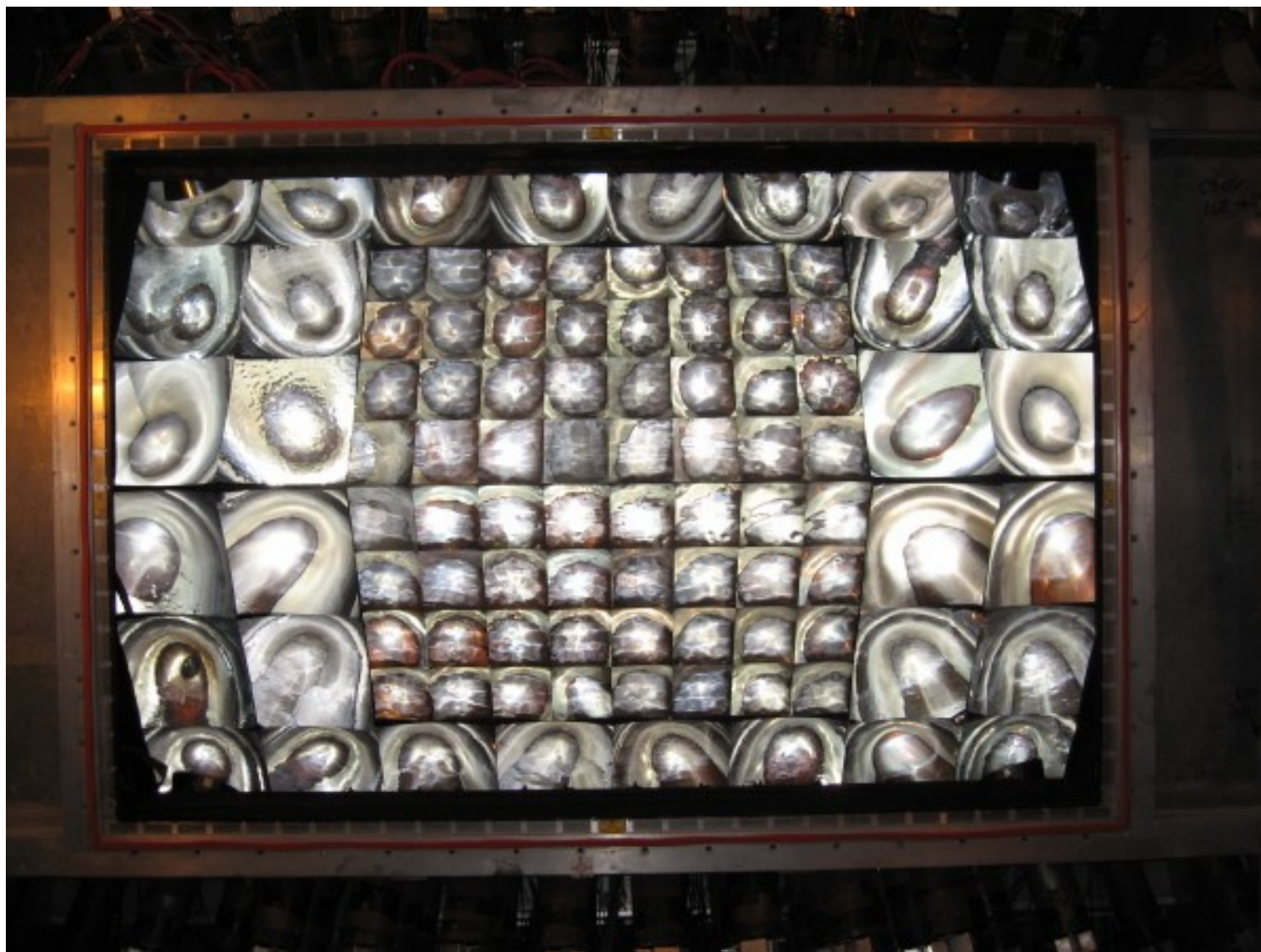
114.38" from apex and 12" west (beam left)



120.38" from apex (near to E907 position)



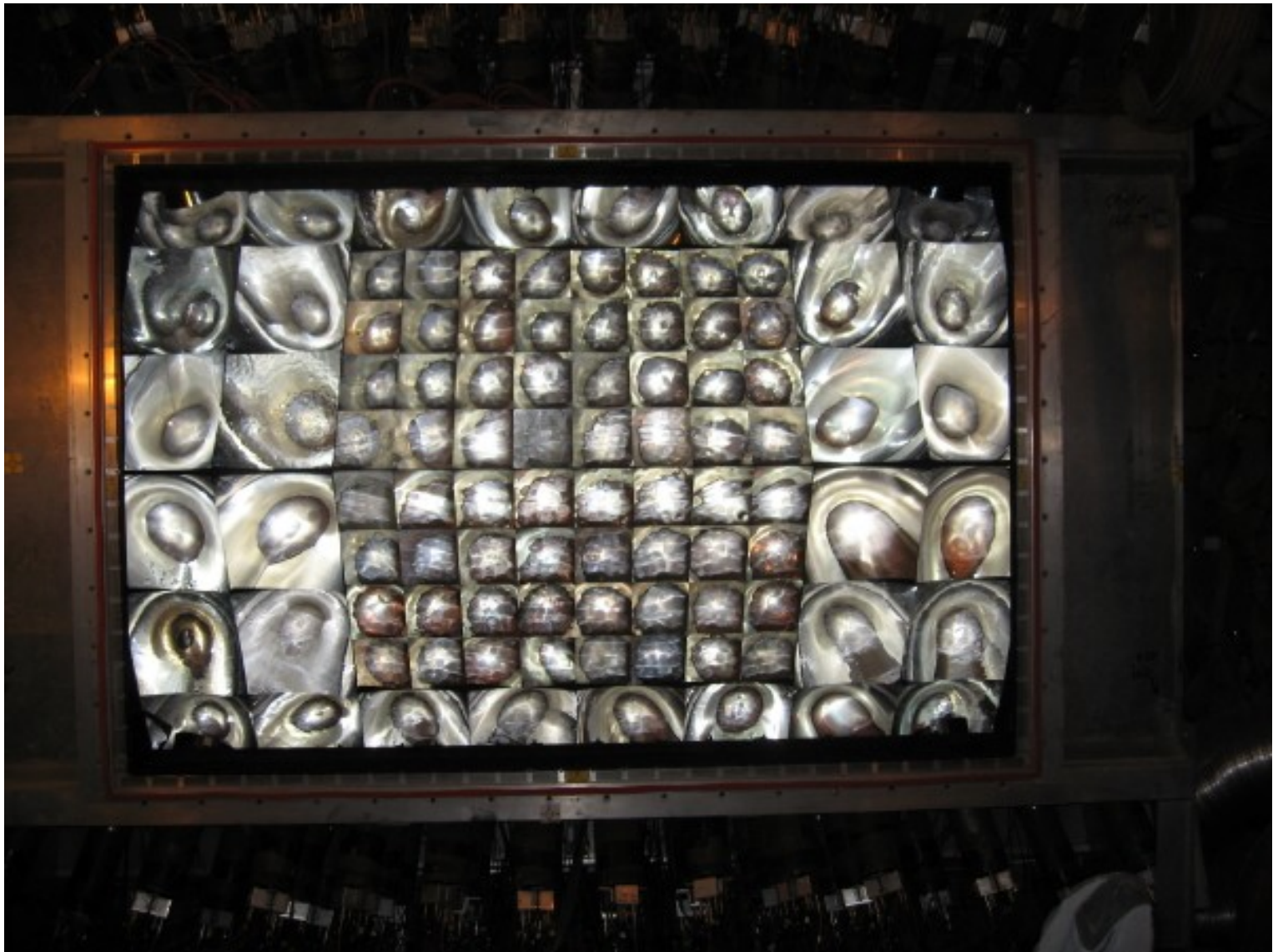
126.38" from apex (original design distance)



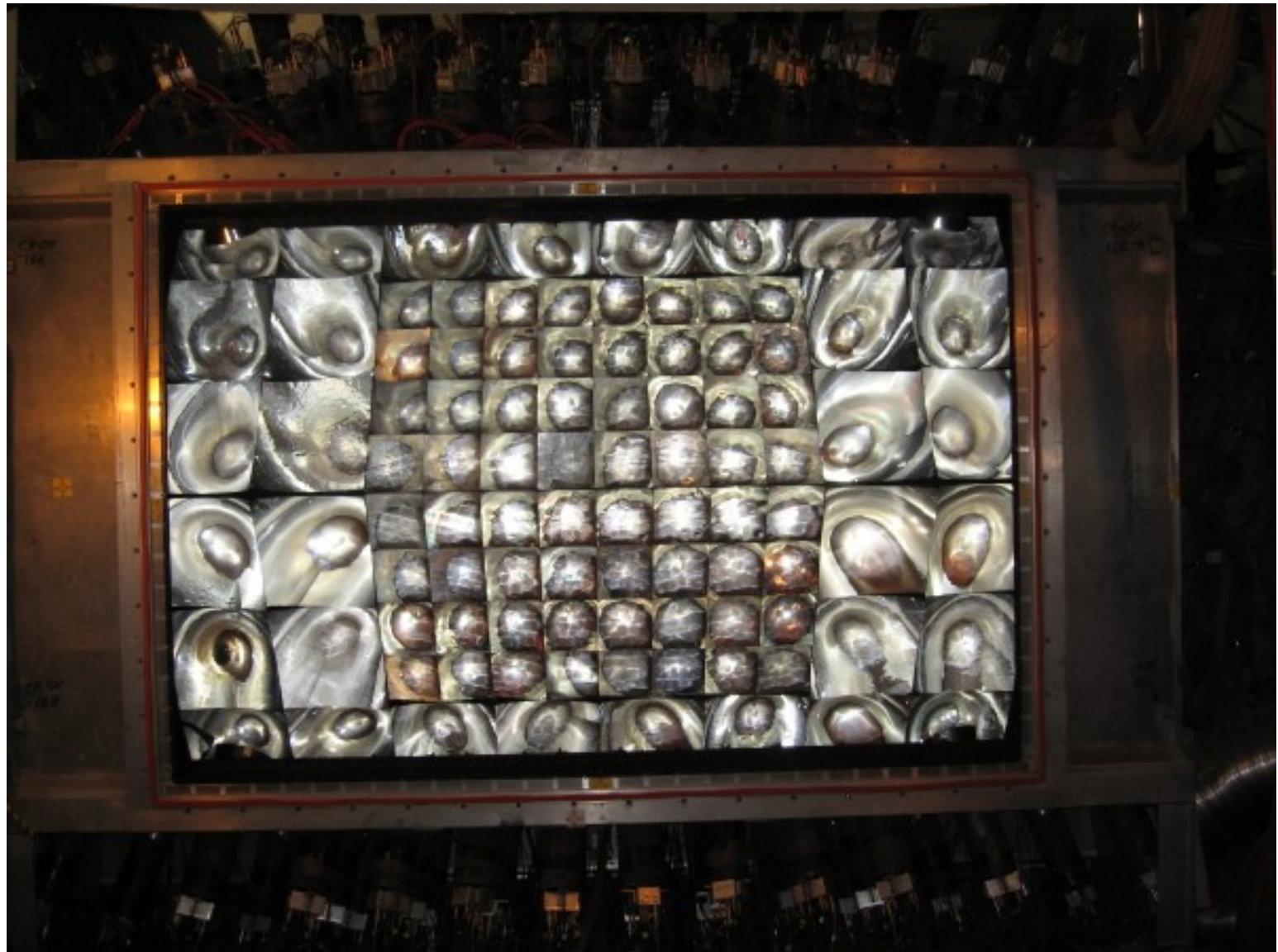
132.38" from apex



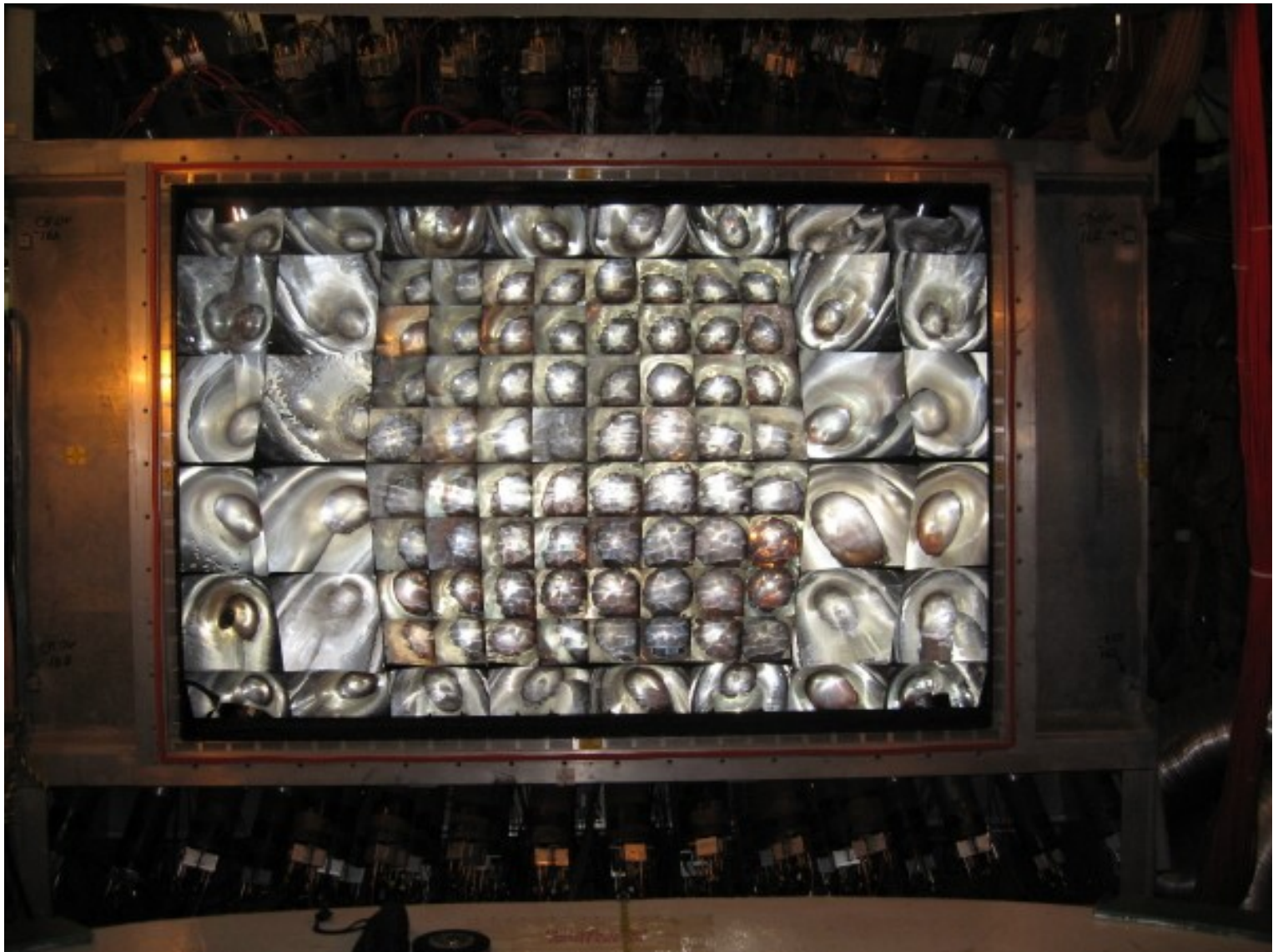
138.38" from apex



144.38" from apex



150.38" from apex



150.38" from apex and 12" east (beam right)



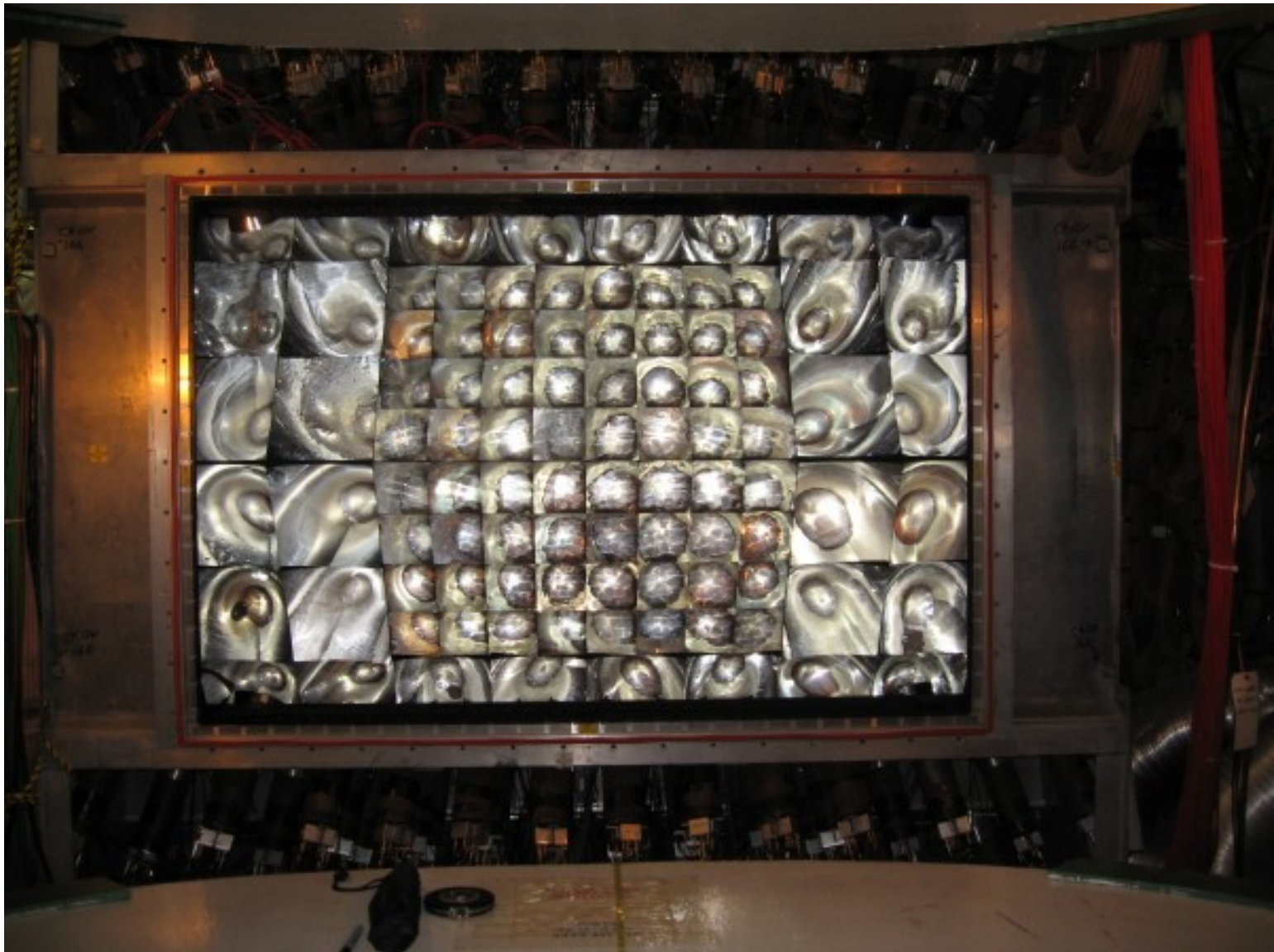
150.38" from apex and 24" east (beam right)



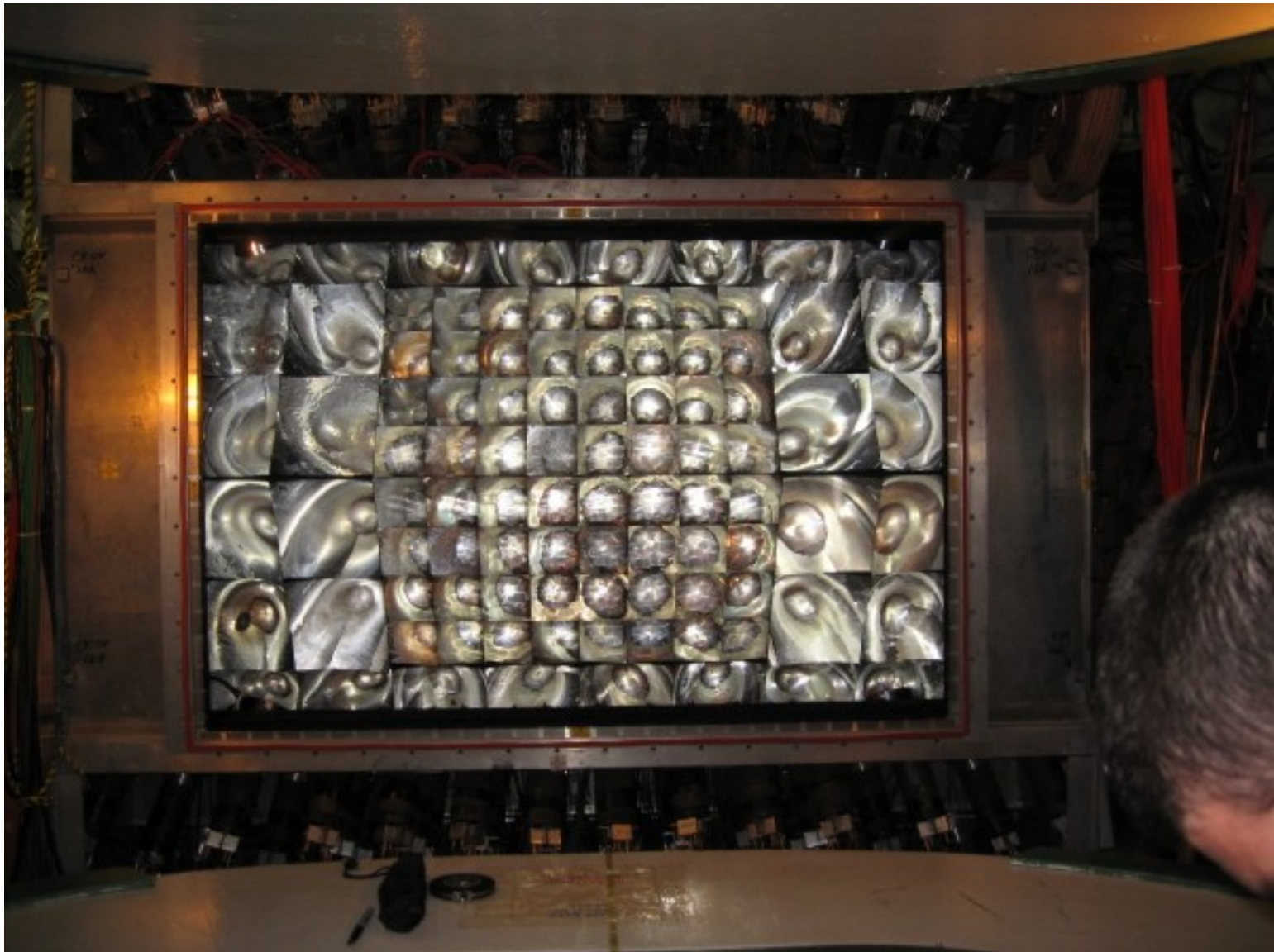
150.38" from apex and 12" west (beam left)



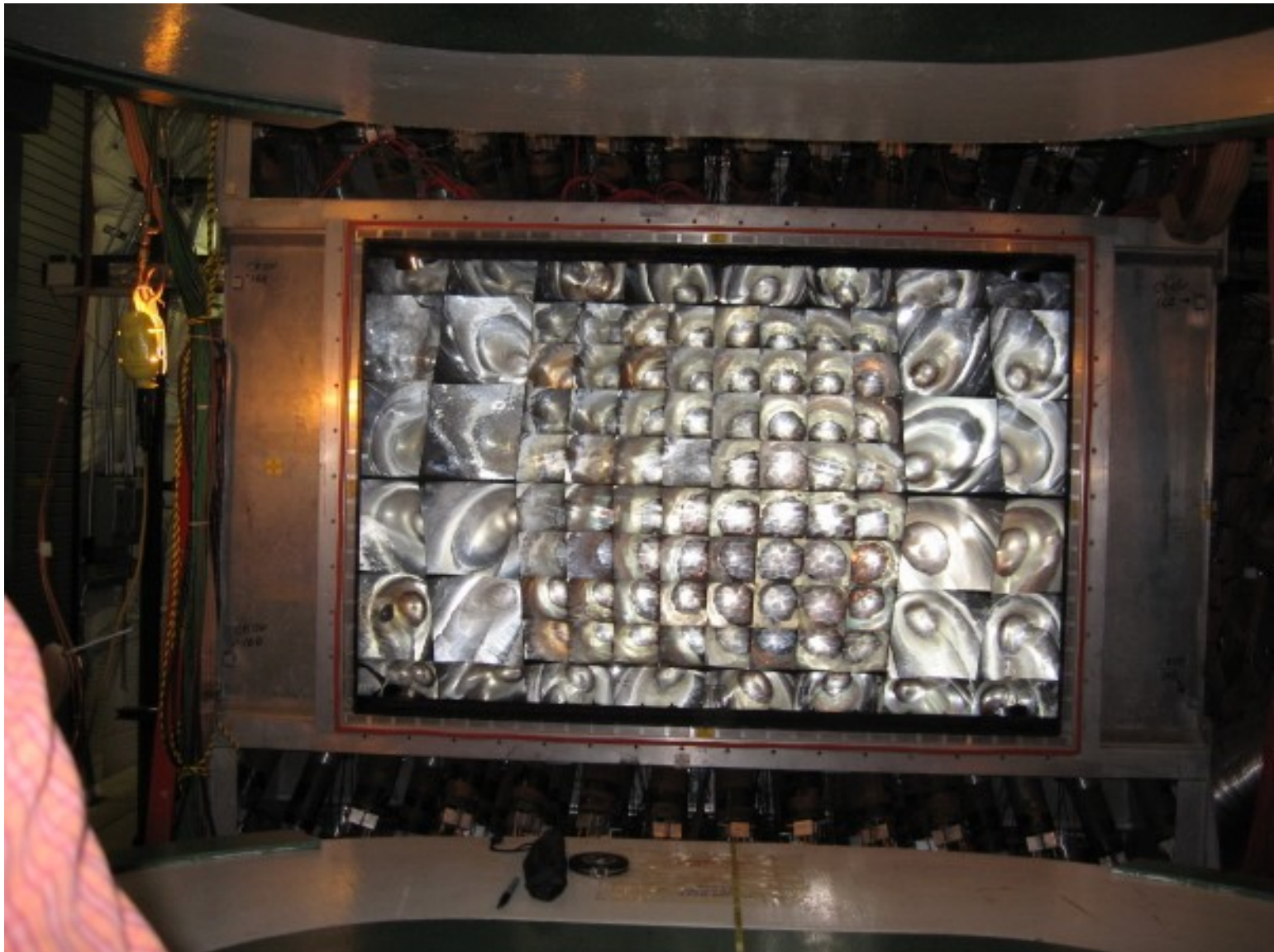
156.38" from apex



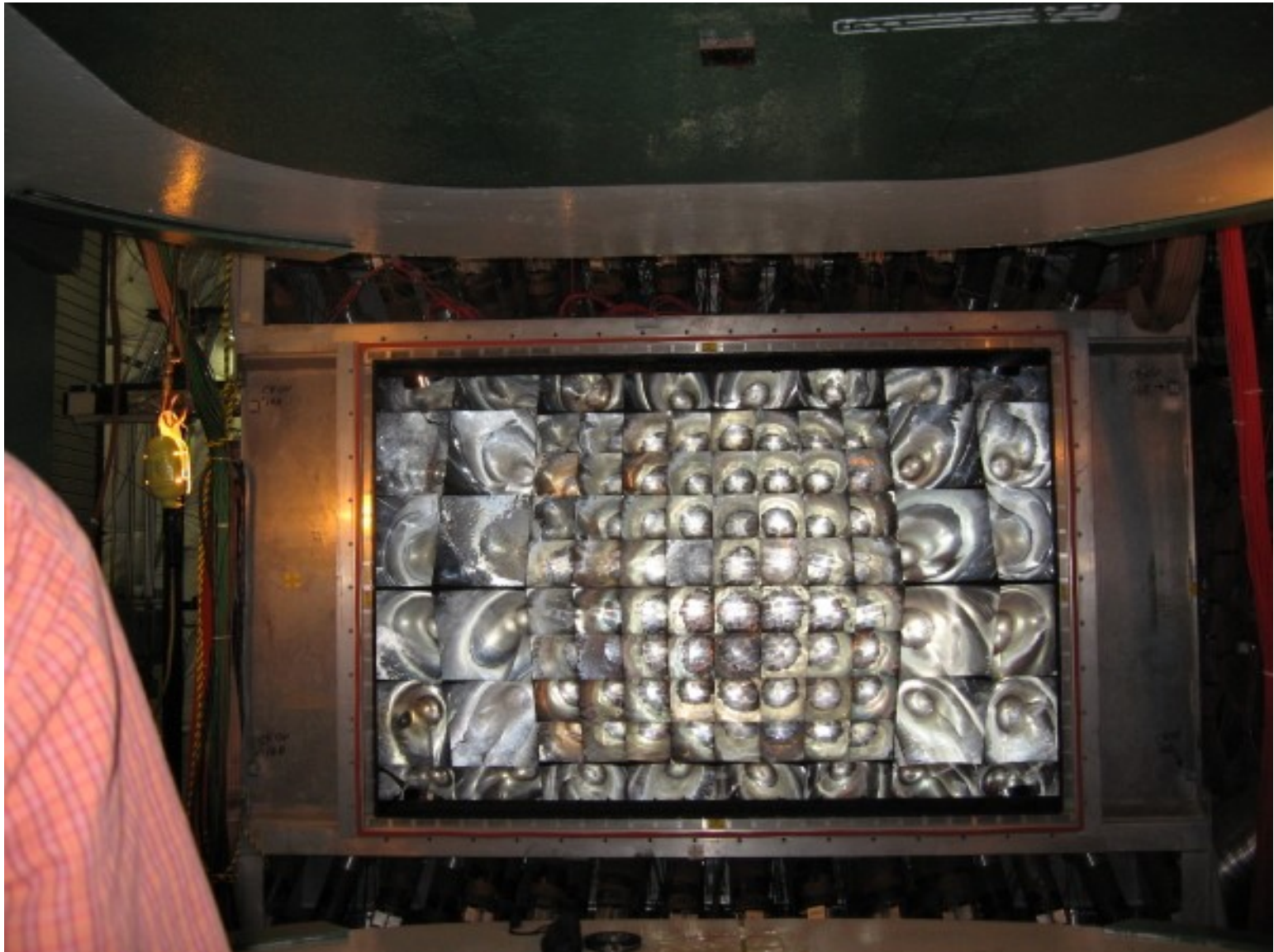
162.38" from apex



168.38" from apex



176.38" from apex



Conclusions

- Photocathode illumination depends on apex to target distance.
- Dependence is greater for mirrors away from the beam axis.
- Original design distance of 126" is best.
- Lower mirror plane was slightly misaligned